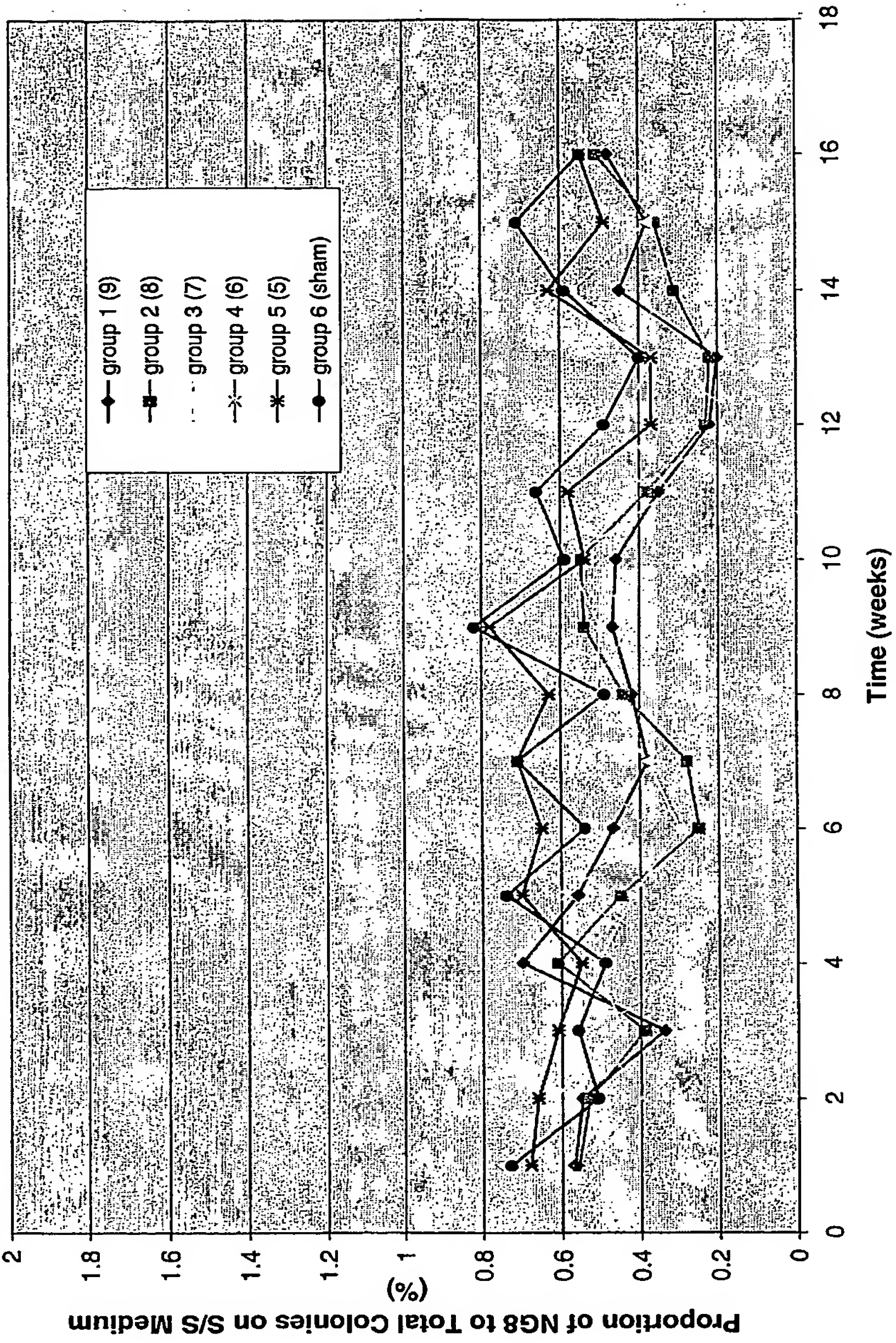


Caries Probiotic Study



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FIGURE 2A

Comparison of *S. mutans* JH145 LDH gene to *S. mutans* BHT-2 LDH gene.

ldh Start: base 486 (Bold)

JH145 mutation: 1 bp deletion at base 718 of BHT-2

ldh Stop: base 1474/BHT-2 and 1473/JH145 (Underline)

JH145: 191	tcacgaacatctggcagggcacgagaaacaataacactcatagcatagtcaataaaactc	250
BHT-2: 191	tcacgaacatctggcagggcacgagaaacaataacactcatagcatagtcaataaaactc	250
JH145: 251	gttttcatttcactcgttaaattaacatctactaaatttctatcttgcattaaaaaatgc	310
BHT-2: 251	gttttcatttcactcgttaaattaacatctactaaatttctatcttgcattaaaaaatgc	310
JH145: 311	tccatttctagtctaaaactcctttatattatatacacaaaaaatgctctttttcagctat	370
BHT-2: 311	tccatttctagtctaaaactcctttatattatatacacaaaaaatgctctttttcagctat	370
JH145: 371	tctactatagttttcctttaacagaggaaaatactagtgacttttttaacaaaaagtgtt	430
BHT-2: 371	tctactatagttttcctttaacagaggaaaatactagtgacttttttaacaaaaagtgtt	430
JH145: 431	agaataaattcgtataaaaatatacacttaataaattataaggagatgtttagaacatgac	490
BHT-2: 431	agaataaattcgtataaaaatatacacttaataaattataaggagatgtttagaacatgac	490
JH145: 491	tgcaactaaacaacataaaaaagtcaccccttgctcggtgatgggtgctgtaggatcatctta	550
BHT-2: 491	tgcaactaaacaacataaaaaagtcaccccttgctcggtgatgggtgctgtaggatcatctta	550
JH145: 551	cgccttcgccccttggttaaccaaggaatcgctcaagaactcggaattattgaaattcctca	610
BHT-2: 551	cgccttcgccccttggttaaccaaggaatcgctcaagaactcggaattattgaaattcctca	610
JH145: 611	gctggttgaaaaggctggtggagacgctcttgaccttagccatgcacttgccttcacttc	670
BHT-2: 611	gctggttgaaaaggctggtggagacgctcttgaccttagccatgcacttgccttcacttc	670
JH145: 671	accaaagaaaatttacgctgctaaatatgaagactgtgcggtatgctg-ccttggtgtcat	729
BHT-2: 671	accaaagaaaatttacgctgctaaatatgaagactgtgcggtatgctgaccttggtgtcat	730
JH145: 730	tactgcaggtgcacctcaaaaaccaggtgaaactcgtcttgaccttgctcggtaaaaacct	789
BHT-2: 731	tactgcaggtgcacctcaaaaaccaggtgaaactcgtcttgaccttgctcggtaaaaacct	790

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FIGURE 2B

JH145: 790 tgcaatcaacaaatctatcgttacacaagtgggtgaatcaggctttaagggaatcttctt 849
|||||
BHT-2: 791 tgcaatcaacaaatctatcgttacacaagtgggtgaatcaggctttaagggaatcttctt 850

JH145: 850 gggtgctgccaacccagttgacatcttgacttattcaacatggaaattctcagggttccc 909
|||||
BHT-2: 851 gggtgctgccaacccagttgacatcttgacttattcaacatggaaattctcagggttccc 910

JH145: 910 taaagaacgcgctcattgggtctggtacatctcttgatactgctcgtttccgtcaagctct 969
|||||
BHT-2: 911 taaagaacgcgctcattgggtctggtacatctcttgatactgctcgtttccgtcaagctct 970

JH145: 970 tgctgaaaaaatcgggggttgatgctcggtcagtcacgcctatatcatgggtgaacacgg 1029
|||||
BHT-2: 971 tgctgaaaaaatcgggggttgatgctcggtcagtcacgcctatatcatgggtgaacacgg 1030

JH145: 1030 tgattcagaatttgccggttggtctcatgccaatgtagctgggtgtaaattagaacaatg 1089
|||||
BHT-2: 1031 tgattcagaatttgccggttggtctcatgccaatgtagctgggtgtaaattagaacaatg 1090

JH145: 1090 gctgcaagacaaccgtgatggtgatgctgaagggtctcgtaaaactgtttgatatctgttcg 1149
|||||
BHT-2: 1091 gctgcaagacaaccgtgatggtgatgctgaagggtctcgtaaaactgtttgatatctgttcg 1150

JH145: 1150 tgatgctgcttattcaatcatcaacaaaaaagggtgctactttctatgggtatcgctgtcgc 1209
|||||
BHT-2: 1151 tgatgctgcttattcaatcatcaacaaaaaagggtgctactttctatgggtatcgctgtcgc 1210

JH145: 1210 ccttgcccgtatcactaaagcaatcttggtatgacgaaaacgccgttcttccgctttcagt 1269
|||||
BHT-2: 1211 ccttgcccgtatcactaaagcaatcttggtatgacgaaaacgccgttcttccgctttcagt 1270

JH145: 1270 tttccaatcaggccaatacgaagggtgttgaagatgtcttcacgacagccggccatcgt 1329
|||||
BHT-2: 1271 tttccaatcaggccaatacgaagggtgttgaagatgtcttcacgacagccggccatcgt 1330

JH145: 1330 tgggtgcacacggtatcggttcgtccagtaaatattccgttaaataatgatgctgaactgcaaaa 1389
|||||
BHT-2: 1331 tgggtgcacacggtatcggttcgtccagtaaatattccgttaaataatgatgctgaactgcaaaa 1390

JH145: 1390 aatgcaggcttctgctaaacagctgaaagcaatcattgacgaagctttctcaaatgaaga 1449
|||||
BHT-2: 1391 aatgcaggcttctgctaaacagctgaaagcaatcattgacgaagctttctcaaatgaaga 1450

JH145: 1450 atttgctgctgctgcagctcgtaa 1473 SEQ ID NO:1
|||||
BHT-2: 1451 atttgctgctgctgcagctcgtaa 1474 SEQ ID NO:9

FIGURE 2C

BHT-2 Protein Sequence where (-) indicates a stop codon (SEQ ID NO:10) .

```
1  MTATKQHKKVILVGDGAVGSSYAFALVNQGIAQELGIIIEIPQLFEKAVGD 50
51  ALDLSHALAFTSPKKIYAAKYEDCADADLVVITAGAPQKPGETRLDLVGK 100
101 NLAINKSIVTQVVESGFGKIFLVAANPVDILTYSTWKFSGFPKERVIGSG 150
151 TSLDTARFRQALAEKIGVDARSVHAYIMGEHGDSEFAVWSHANVAGVKLE 200
201 QWLQDNRDVDAEGLVKLEFVSVRDAAYSINKKGATFYGIAVALARITKAI 250
251 LDDENAVLPLSVFQSGQYEGVEDVFIGQPAIVGAHGIVRPVNIPLNDAEL 300
301 QKMQASAKQLKAIIDEAFSNEEFAAAAAR- 329
```

JH145 Protein Sequence where (-) indicates a stop codon (SEQ ID NOs:2-8) .

```
1  MTATKQHKKVILVGDGAVGSSYAFALVNQGIAQELGIIIEIPQLFEKAVGD 50
51  ALDLSHALAFTSPKKIYAAKYEDCADAALLSLLQVHLKNQVKLVLTLSVK 100
101 TLQSTNLSLHKWLNQALRESSWLLPTQLTS-LIQHGNSQVSLKNASLVLV 150
151 HLLILLVSVKLLLKKSGMLGQSTPISWVNTVIQNLPGGLMPM-LVLN-N 200
201 NGCKTTVMLMLKVS-NCLYLEVMLLIQSSTKKVLLSMVSLSPVSLKQS 250
251 WMTKTPFFRFQFSNQANTKVLKMSSSDSRPSLVHTVSFVQ-IFR-MMLNC 300
301 KKCRLLLNS-KQSLTKLSQMKNLLLLQLV 329
```